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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,324	10/15/2004	Rigobert Leon Maria Bosman	120668	9222

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EXAMINER

KHAN, AMINA S

ART UNIT PAPER NUMBER

1751

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/511,324	Applicant(s) BOSMAN ET AL.	
	Examiner Amina Khan	Art Unit 1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/14/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-7 and 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 recites the term "high-strength" in line 2, which renders the claim indefinite. The examiner is unclear as to what constitutes a "high-strength" polyester yarn. Appropriate clarification of the claim language is required.

Claims 5-7 and 12-14 are also rejected for being dependent on claim 4 and inheriting the same deficiency.

3. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 9 recites the term "bright color" in line 2, which renders the claim indefinite. The examiner is unclear as to what constitutes a "bright color". Appropriate clarification of the claim language is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall (US 4,800,117) in view of Makino et al. (JP 410140479).

Marshall teaches methods of making seat belts for passenger vehicles with high strength polyester wherein the polyester is woven and dyed with disperse dyestuffs in a continuous process which requires the use of heat to fix the dye (column 3, lines 1-21). Marshall further teaches that polyethylene terephthalate was used and the two yarns were woven together followed by dyeing with a disperse dyestuff and fixed in a thermosol oven at 190-220°C (column 3, lines 44-45; column 4, lines 1-21).

Marshall does not teach spun-dyed fibers and is silent as to the number of disperse dyestuffs in the dyebath.

Makino et al. teach spun-dyed polyesters excellent in processability when weaving a seat belt that provide the resulting seat belt with high strength and excellent durability (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the methods of Marshall by using a spun-dyed polyester fiber as one of the fibers weaved into the seat belt as taught by Makino et al. because Makino et al. teach that seat belts produced with spun-dyed polyester have high strength and excellent durability.

Regarding the limitation of claim 9, wherein the spun dyed yarn has a bright color, this is simply a design choice and it is well known that seat belts and disperse dyes are available in a variety of colors including bright colors.

Regarding the limitation of a dyebath with only one disperse dye, again this is a design choice based on the intended color of the seat belt. While Marshall is silent as to the number of dyes in the dyebath, one of ordinary skill in the art would have been motivated to optimize to a single disperse dye to obtain a seat belt of uniform coloring of the single dye. Optimization of a result effective variable only requires routine skill in the art. One of ordinary skill in the art would have been motivated to combine the teaching of the references absent unexpected results.

6. Claims 5-9 and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall (US 4,800,117) in view of Makino et al. (JP 410140479) as applied to the claims above and further in view of Droste et al. (GB 2,040,327).

Marshall and Makino et al. are relied upon as set forth above. Marshall in an example teaches polyethylene terephthalate with 840 denier and 70 filament (column 3, lines 44-45) however this is simply an example and is not limiting. Marshall further teaches that the seat belts produced are resistant to abrasion, fading by sunlight and the dyestuffs do not rub off even when the seat belt is wet (column 3, lines 5-15).

Marshall and Makino et al. do not teach the instantly claimed breaking tenacities, hot-air shrinkages, elongation at break, yarn linear densities and filament linear densities of the polyester fibers.

Droste et al. teach spun-dyed yarns for use in seat belt webbing which comprise polyethylene terephthalate of tensile strength 50-90 cN/tex, preferably 60-80 cN/tex, hot air shrinkage (after 15 minutes at 190°C) of from 8-22%, preferably from 10-20%, uniform breaking elongation of 10-15%, preferably from 12-14%, overall denier from 100-3000 dtex, preferably from 550-1670 dtex, and individual deniers from 5-20 dtex, preferably 8-15 dtex (page 2, lines 20-30). Droste et al. further teach dyeing spun-dyed yarns bright colors (page 2, lines 20-21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the methods of Marshall and Makino et al. by utilizing the polyethylene terephthalate fibers taught by Droste et al. because Droste et al. teach these fibers produce seat belts with high tensile strength which is required in the industry. One of ordinary skill in the art would have been motivated to combine the teachings of the references absent unexpected results.

7. Claims 5-8 and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall (US 4,800,117) in view of Makino et al. (JP 410140479) as applied to the claims above and further in view of Van Leeuwen et al. (US 4,473,617).

Marshall and Makino et al. are relied upon as set forth above. Marshall in an example teaches polyethylene terephthalate with 840 denier and 70 filament (column 3, lines 44-45) however this is simply an example and is not limiting. Marshall further teaches that the seat belts produced are resistant to abrasion, fading by sunlight and the dyestuffs do not rub off even when the seat belt is wet (column 3, lines 5-15).

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Marshall and Makino et al. do not teach the instantly claimed breaking tenacities, hot-air shrinkages, elongation at break, yarn linear densities and filament linear densities of the polyester fibers.

Van Leeuwen et al. teach seat belt webbing which comprise polyethylene terephthalate of tensile strength 50-150 cN/tex, breaking elongation of 7-25%, overall denier from 300-5000 dtex, and individual deniers from 30-600 dtex (column 3, lines 61-68; column 4, lines 1-5). Van Leeuwen et al. specifically teach polyethylene terephthalate with dtex of 947 or 952, breaking tenacity of 77.3 or 69.0, elongation at ruptures of 14.2 or 14.1%, hot air shrinkage (4 min-160°C) of 7.0 or 5.7 (column 7, table II, examples 2 and 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the methods of Marshall and Makino et al. by utilizing the polyethylene terephthalate fibers taught by Van Leeuwen et al. because Van Leeuwen et al. teach these fibers produce seat belts that will not wear excessively under high load. One of ordinary skill in the art would have been motivated to combine the teachings of the references absent unexpected results.

Van Leeuwen et al. has hot air shrinkage values of polyethylene terephthalate measured at 160°C for 4 min. These values are slightly below those instantly claimed, however at increased time and temperatures the % of hot-air shrinkage would increase. Furthermore, the values of Van Leeuwen are not limiting since they are simply cited in an example. One of ordinary skill would have been motivated to optimize to the instantly claimed hot-air shrinkage absent unexpected results.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amina Khan whose telephone number is (571) 272-5573. The examiner can normally be reached on Monday through Friday, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amina Khan

Amina Khan, PhD
Patent Examiner
November 6, 2006

Loann M. Douyon
LOANN M. DOUYON
PATENT EXAMINER